

A2 5.(amended) The isolated HLA class II-binding peptide of claim 3, wherein the isolated peptide comprises an endosomal targeting signal.

A3 7.(amended) The isolated HLA class II-binding peptide of claim 3 wherein the isolated peptide is non-hydrolyzable.

A4 10.(amended) A composition comprising an isolated EphA3 HLA class I-binding peptide and the isolated EphA3 HLA class II-binding peptide of claim 1.

A5 15.(amended) An isolated nucleic acid encoding the peptide of claim 3, wherein the nucleic acid does not encode full length EphA3.

A6 21.(amended) A method for enriching selectively a population of T lymphocytes with T lymphocytes specific for an EphA3 HLA binding peptide comprising:

contacting a source of T lymphocytes which contains a population of T lymphocytes with an agent presenting a complex of the EphA3 HLA binding peptide of claim 1 and an HLA molecule in an amount sufficient to selectively enrich the population of T lymphocytes with the T lymphocytes specific for an EphA3 HLA binding peptide.

25.(amended) A method for diagnosing a disorder characterized by expression of EphA3 comprising:

A7 contacting a biological sample isolated from a subject with an agent that is specific for the EphA3 HLA binding peptide of claim 1, and

determining the interaction between the agent and the EphA3 HLA binding peptide as a determination of the disorder.

A8 27.(amended) A method for diagnosing a disorder characterized by expression of the EphA3 HLA binding peptide of claim 1 which forms a complex with an HLA molecule, comprising:

contacting a biological sample isolated from a subject with an agent that binds the

A⁸ complex; and

determining binding between the complex and the agent as a determination of the disorder.

A⁹ 29.(amended) A method for treating a subject having a disorder characterized by expression of EphA3, comprising:

administering to the subject an amount of the EphA3 HLA binding peptide of claim 1 sufficient to ameliorate the disorder.

A¹⁰ 41.(amended) A method for treating a subject having a disorder characterized by expression of EphA3, comprising:

administering to the subject an amount of autologous T lymphocytes sufficient to ameliorate the disorder, wherein the T lymphocytes are specific for complexes of an HLA molecule and the EphA3 HLA binding peptide of claim 1.

A¹¹ 46.(amended) An isolated polypeptide which binds selectively to a polypeptide of claim 3, provided that the isolated polypeptide is not an HLA molecule.

A¹² 50.(amended) An isolated T lymphocyte which selectively binds a complex of an HLA molecule and the EphA3 HLA binding peptide of claim 1.

A¹³ 52.(amended) An isolated antigen presenting cell which comprises a complex of an HLA molecule and the EphA3 HLA binding peptide of claim 1.

A¹⁴ 54.(amended) A vaccine comprising the polypeptide of claim 1 and a pharmaceutically acceptable carrier.

A¹⁵ 56.(amended) A vaccine comprising a T lymphocyte of claim 50, and a pharmaceutically acceptable carrier.